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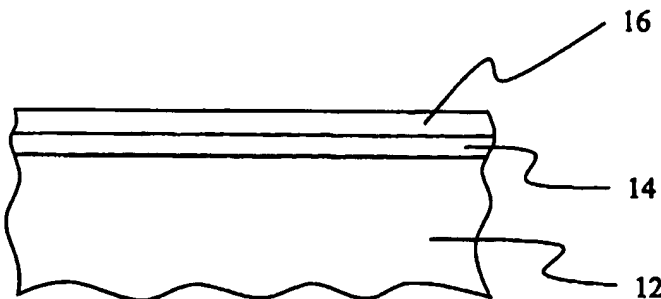
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(54) Title: PROTECTIVE COATING FOR AUTOMOTIVE TRIM PIECES AND METHOD OF MAKING THE SAME



(57) Abstract: The invention provides a method of providing a protective coating on a surface of an aluminum article, such as exterior automotive trim pieces. An anodized coating is provided on the surface of the aluminum article. The pores of the anodized coating are then sealed. A thermosetting cationic acrylic resin is electrocoated over the anodized coating. The thermosetting cationic acrylic resin is thermally cured. The anodized coating has a sufficient degree of softness such that the curing of the thermosetting cationic acrylic resin maintains a continuous anodized coating and does not cause

a formation of fractures. The anodized coating is provided at a temperature between about 20 to 30°C, at a voltage of about 10 to 15V, and at an electrolyte concentration of about 10 to 15% by volume. The thermosetting cationic acrylic resin includes a UV stabilizer. If desired, an electrolytic coloring step is performed prior to sealing the pores of the anodized coating.

Abstract

The invention provides a method of providing a protective coating on a surface of an aluminum article, such as exterior automotive trim pieces. An anodized coating is provided on the surface of the aluminum article. The pores of the anodized coating are then sealed. A thermosetting cationic acrylic resin is electrocoated over the anodized coating. The thermosetting cationic acrylic resin is thermally cured. The anodized coating has a sufficient degree of softness such that the curing of the thermosetting cationic acrylic resin maintains a continuous anodized coating and does not cause a formation of fractures. The anodized coating is provided at a temperature between about 20 to 30° C, at a voltage of about 10 to 15V, and at an electrolyte concentration of about 10 to 15% by volume. The thermosetting cationic acrylic resin includes a UV stabilizer. If desired, an electrolytic coloring step is performed prior to sealing the pores of the anodized coating.